COLORADO
Air Pollution Control Division
Department of Public Health & Environment

GENERAL PERMIT

Oil and Gas
WELL PRODUCTION FACILITIES

PERMIT NO: GP09 Version 1

FINAL APPROVAL

Stephanie Spector, P.E.
Oil and Gas Permitting Supervisor

October 11, 2019
Date Issued

Permit History

Issuance	Date	Description
Version 1	October 11, 2019	Initial issuance

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This permit is granted by the Colorado Department of Public Health and Environment, Air Pollution Control Division subject to all rules and regulations of the Colorado Air Quality Control Commission and the Colorado Air Pollution Prevention and Control Act (C.R.S. 25-7-101 et seq), to those general terms and conditions included in this permit and the following specific terms and conditions:

I. General Permit Applicability

I.A. This general permit may be used only for oil and gas well production facilities as defined in Regulation Number 7, Section XVII.A. Equipment covered by this permit is limited to the following sources:

I.A.1. Natural gas-fired reciprocating internal combustion engines

I.A.2. Storage tanks used to store condensate, crude oil, intermediate hydrocarbon liquids, or produced water

I.A.3. Hydrocarbon liquid loading from storage tanks to transport trucks

I.A.4. Separators

I.A.5. Fugitive component leak emissions

I.A.6. Natural gas-driven pneumatic controllers

I.A.7. natural gas-driven diaphragm pneumatic pumps

I.A.8. Well maintenance and well unloading activities

I.A.9. Natural gas fired turbines

I.A.10. Combustion devices, vapor recovery units, vapor balance or other division approved control equipment used to reduce emissions from the above sources

I.B. The owner or operator of any oil and gas well production facility that can comply with all of the conditions described in this permit and meet all of the requirements in this Section I may register for this general permit.

I.C. This general permit applies only to the well production facility and the equipment described in Section I.A for which the operator has registered under this general permit in the application materials submitted to the division.

I.D. This general permit may not be used for new major stationary source well production facilities or modifications at existing major stationary source well production facilities that are subject to Regulation Number 3, Part D Prevention of Significant Deterioration (PSD) or Nonattainment New Source Review (NA NSR).

I.E. The owner or operator of the well production facility registered under this general permit must file Air Pollutant Emission Notices (APENs) with the division in accordance with Regulation Number 3, Part A, Section II.D.1.lll. APENs must be filed

for each emissions unit requiring an APEN according to the requirements of Regulation Number 3, Part A, Section II.B.3.

I.F. Registration under this general permit cannot be used to provide enforceable limitations after registration expires. (Reference: Regulation Number 3, Part B, Section III.E.)

I.F.1. Registration under this general permit expires at the earliest of the following:

I.F.1.a. Eighteen (18) months after the division's receipt of a complete GP09 registration request; or

I.F.1.b. After issuance of all general permits and/or individual construction permits for those emission points covered under this general permit that are required to obtain a permit pursuant to Regulation Number 3, Parts A and B; or

I.F.1.c. Six (6) months after the division's receipt of a complete GP09 registration request if the owner or operator has not commenced construction of the stationary source. (Reference: Regulation Number 3, Part A, Section I.B.11)

I.F.2. For emission points not yet covered by a permit issued by the division other than this general permit, requirements for those emission points contained in this general permit continue to apply until:

I.F.2.a. the date of issuance of an emission point specific construction permit, or

I.F.2.b. the date of receipt by the division of a complete emission point specific general permit registration request, or

I.F.2.c. expiration of the registration under this general permit as defined above.

I.F.3. The division may grant extensions upon request of the owner or operator. The owner or operator must request an extension prior to the expiration of the general permit registration. If an extension has been requested but not yet granted at the time of expiration, registration under this general permit will be extended until such time as the division denies the extension request or until the revised expiration date granted by the division.

I.G. The owner or operator must notify the Air Pollution Control Division (the division) no later than fifteen days after commencement of operation by submitting a Notice of Startup form to the division for the facility covered by this permit. For the purpose of this condition, commencement of operation is defined as the date permanent production equipment is in place and product is consistently flowing to sales lines, gathering lines or storage tanks from the first producing well at the stationary source. The Notice of Startup form may be downloaded online at www.colorado.gov/cdphe/air/manage-permit. Failure to notify the division of startup of the permitted source is a violation of Air Quality Control Commission (AQCC) Regulation Number 3, Part B, Section III.G.1. and can result in the revocation of the permit.

II. General Operating Conditions

II.A. Air pollution control equipment may be used to comply with the emission limits and performance standards required in this general permit.

II.B. For combustion devices and air pollution control equipment subject to a no visible emissions standard in Regulation Number 7, visible emissions must not exceed any period or periods of duration greater than or equal to one minute in any fifteen minute period during normal operation. When owners or operators measure opacity for this standard, EPA Method 22 must be used. (Reference: Regulation Number 7, Sections XVII.A.17. and XVII.B.2.)

II.C. For combustion devices and air pollution control equipment not subject to a no visible emissions standard in Regulation Number 7, visible emissions must not exceed twenty percent (20%) opacity. During periods of startup, process modification, or adjustment or occasional cleaning of control equipment, visible emissions must not exceed 30% opacity for more than six minutes in any sixty consecutive minutes. When owners or operators measure opacity for this standard, EPA Method 9 must be used. (Reference: Regulation Number 1, Sections II.A.1. and II.A.4.)

II.D. If a flare or other combustion device is used to comply with the requirements of this permit, the owner or operator must ensure the combustion device meets the following requirements.

II.D.1. The combustion device must have a design destruction efficiency of at least 98% for hydrocarbons;

II.D.2. The combustion device must be enclosed;

II.D.3. The combustion device must be equipped with an operational auto-igniter;

II.D.4. The combustion device must have no visible emissions during normal operations, as defined under Regulation Number 7, Section XVII.A.17.; and

II.D.5. The combustion device must be designed so that an observer can, by means of visual observation from the outside of the enclosed flare or combustion device, or by other convenient means approved by the division, determine whether it is operating properly.

II.E. This well production facility is subject to the odor requirements of Regulation Number 2. (State only enforceable)

III. Annual Emission Limitation Requirements

III.A. Equipment Specific Emission Limitations

III.A.1. The maximum allowable emissions from each emission point registered under this general permit must not exceed the requested federally enforceable annual emission rates as certified by the owner or operator in the general permit registration. (Reference: Regulation Number 3, Part B, Sections II.A.4. and II.A.7.)

III.A.2. The owner or operator must operate and maintain the equipment registered under the general permit with the air pollution control equipment as listed in the general permit registration to reduce emissions to less than or equal to the emissions limits established in this permit. (Reference: Regulation Number 3, Part B, Sections II.A.4. and II.A.7.)

III.B. Facility-Wide Emission Limitations

III.B.1. The maximum allowable emissions of criteria air pollutants from all emission points at the stationary source are federally enforceable and must not exceed the following limitations: (Reference: Regulation Number 3, Part B, Sections II.A.4. and II.A.7.)

III.B.1.a. Particulate Matter (PM)	90.0 tons per year
III.B.1.b. Particulate Matter (PM_{10})	90.0 tons per year
III.B.1.c. Particulate Matter ($PM_{2.5}$)	90.0 tons per year
III.B.1.d. Sulfur Dioxide (SO_2)	90.0 tons per year
III.B.1.e. Nitrogen Oxides (NOx):	90.0 tons per year

III.B.1.f. Carbon Monoxide (CO): 90.0 tons per year

III.B.1.g. Volatile Organic Compounds (VOC): 90.0 tons per year

III.B.2. The maximum allowable emissions of hazardous air pollutants (HAPs) from all emissions points at the stationary source are federally enforceable and must not exceed the following limitations: (Reference: Regulation Number 3, Part B, Sections II.A.4. and II.A.7.)

III.B.2.a. Each Individual HAP: 8.0 tons per year

III.B.2.b. Combined total of all HAPs: 20.0 tons per year

IV. Other Emission Limitations and Operation and Maintenance Requirements

IV.A. Facility-Wide Requirements

IV.A.1. All intermediate hydrocarbon liquid collection, storage, processing and handling operations, regardless of size, must be designed, operated and maintained so as to minimize leakage of volatile organic compounds and other hydrocarbons to the atmosphere to the extent reasonably practicable. (Reference: Regulation Number 7, Section XVII.B.1.a.)

IV.A.2. In any ozone nonattainment or ozone attainment/maintenance area, all condensate collection, storage, processing and handling operations, regardless of size, must be designed, operated and maintained so as to minimize leakage of volatile organic compounds to the atmosphere to the maximum extent practicable. (Reference: Regulation Number 7, Section XII.C.1.b.)

IV.A.3. The owner or operator must maintain documentation clearly outlining applicable requirements of New Source Performance Standard (NSPS) and Maximum Achievable Control Technology (MACT) for equipment registered under this permit. The documentation must be located on-site or at a local field office with well production facility responsibility. Records may be kept in either electronic or hard copy format provided that they can be promptly supplied to the division upon request. Potentially applicable requirements that may apply include, but are not limited to:

IV.A.3.a. NSPS GG, Standards of Performance for Stationary Gas Turbines (Reference: 40 C.F.R Part 60, Subparts A and GG and Regulation Number 6, Part A, Subparts A and GG)

IV.A.3.b. NSPS Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels for which construction, reconstruction or modification commenced after July 23, 1984. (Reference: 40 C.F.R Part 60, Subparts A and Kb and Regulation Number 6, Part A, Subparts A and Kb)

IV.A.3.c. NSPS JJJJ, Standards of Performance for Spark Ignition Internal Combustion Engines (Reference: 40 C.F.R. Part 60, Subparts A and JJJJ)

IV.A.3.d. NSPS KKKK, Standards of Performance for Stationary Combustion Turbines (Reference: 40 C.F.R Part 60, Subparts A and KKKK and Regulation Number 6, Part A, Subparts A and KKKK)

IV.A.3.e. NSPS OOOO, Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution (Reference: 40 C.F.R. Part 60, Subparts A and OOOO and Regulation Number 6, Part A, Subparts A and OOOO)

IV.A.3.f. NSPS OOOOa, Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution (Reference: 40 C.F.R. Part 60, Subparts A and OOOOa)

IV.A.3.g. MACT HH, National Emissions Standards for Hazardous Air Pollutants for Source Categories from Oil and Natural Gas Production Facilities (Reference: 40 C.F.R Part 63, Subparts A and HH and Regulation Number 8, Part E, Subpart A and HH)

IV.A.3.h. MACT YYYY, National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines (Reference: 40 C.F.R. Part 63, Subparts A and YYYY and Regulation Number 8, Part D, Subparts A and YYYY)

IV.A.3.i. MACT ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (Reference: 40 C.F.R. Part 63, Subparts A and ZZZZ and Regulation Number 8, Part D, Subparts A and ZZZZ)

IV.B. Natural Gas Fired Engine Requirements

IV.B.1. The owner or operator of natural gas fired reciprocating internal combustion engines registered under this permit must be operated such that emissions do not exceed the emission standards contained in the table

below. If the engine is subject to a more stringent applicable performance standard for a specific pollutant, the most stringent performance standard will apply. (Reference: Regulation Number 3, Part B, Section III.E.)

Maximum Engine HP	Engine Design	Emission Standard in g/hp-hr		
		NOx	CO	VOC
Greater than or equal to 100 and less than 500	Rich Burn	2.0	4.0	1.0
	Lean Burn	2.0	4.0	1.0
Greater than or equal to 500	Rich Burn	0.7	1.5	1.0
	Lean Burn	2.0	1.5	0.7

IV.B.2. The owner or operator of natural gas fired reciprocating internal combustion engines that are greater than or equal to 100 hp and constructed in or relocated to the state of Colorado from another state on or after the applicable date below must be operated such that emissions do not exceed the emission standards in the table below as expressed in units of grams per horsepower-hour (g/hp-hr). (Reference: Regulation Number 7, Section XVII.E.)

Maximum Engine HP	Construction or Relocation Date	Emission Standard in g/hp-hr		
		NOx	CO	VOC
Greater than or equal to 100 and less than 500	January 1, 2011	1.0	2.0	0.7
Greater than or equal to 500	July 1, 2010	1.0	2.0	0.7

IV.B.3. The owner or operator of any rich burn natural gas-fired reciprocating internal combustion engine with a nameplate rating of 500 horsepower or greater located in an ozone nonattainment area must install and operate

the engine with a non-selective catalyst reduction (NSCR) system and an air fuel controller. (Reference: Regulation Number 7, Section XVI.B.1.)

IV.B.4. The owner or operator of any lean burn natural gas-fired reciprocating internal combustion engine with a nameplate rating of 500 horsepower or greater located in an ozone nonattainment area must install and operate the engine with an oxidation catalyst. (Reference: Regulation Number 7, Section XVI.B.2.)

IV.B.5. These general operation and maintenance requirements apply to all natural gas spark ignition engines at the well production facility if controlled by air pollution control equipment.

IV.B.5.a. Each engine and associated catalytic control device, if applicable, must be maintained and operated according to the manufacturer's scheduled maintenance guide or equivalent. A company may establish its own equivalent maintenance schedule providing it achieves efficient engine operation and meets or exceeds the performance standards of this permit.

IV.B.5.b. A copy of maintenance schedules must be kept including the date and description of maintenance.

IV.B.5.c. If maintenance activities or actions are dependent upon hours of operation, then engine operating hours must be tracked and recorded. If a method other than hours of operation is used, then the tracking method must be recorded.

IV.B.5.d. For each rich burn engine controlled with a NSCR must be equipped with an air-fuel ratio controller (AFRC). Each AFRC must be maintained per the manufacturer's recommended maintenance or equivalent, including replacement of the oxygen sensor as necessary for oxygen sensor-based controllers.

IV.B.5.e. For each engine equipped with a catalytic emission control device, the catalyst must be cleaned, reconditioned and replaced at least as often as the manufacturer's recommended maintenance schedule or equivalent.

IV.B.5.f. For each engine equipped with a catalytic emission control device, the catalyst inlet temperature must be recorded weekly. If the temperature is outside of the range specified below, corrective action must be taken and documented.

IV.B.5.f.(i) For a rich burn engine with a non-selective catalytic reduction (NSCR) emission control device, the temperature into the catalyst must be between 750°F and 1250°F.

IV.B.5.f.(ii) For a lean burn engine with an oxidation catalyst emission control device, the temperature into the catalyst must be between 450°F and 1350°F.

IV.B.5.g. The pressure drop across the catalyst bed must be measured and recorded monthly. The monthly pressure drop values must not deviate by more than +/- 2 inches of water column of the most recent baseline value established.

IV.B.5.g.(i) If the pressure drop value is out of range, corrective action must be taken and documented within 15 days of the measurement. The owner or operator must perform one or more of the following:

- The owner or operator may artificially load the engine to within +/- 10 percent of the most recent baseline load value established. If the pressure drop is then within range, the pressure drop and load values must be documented and no further corrective action is required;
- The owner or operator may forego maintenance activities and perform a portable analyzer test to establish a new pressure drop baseline; or
- Other corrective action as the owner or operator deems appropriate.

IV.B.5.g.(ii) The baseline pressure drop must be established by recording the engine load and pressure drop across the catalyst during engine testing. The baseline pressure drop must be periodically reestablished upon the following occurrences:

- During each initial compliance test required by Section V. If historical initial compliance test data is used to fulfill Section V and baseline pressure drop was not recorded during the

compliance test, the operator may defer establishing the baseline pressure drop until the first periodic performance test required by Section VI.D.4.

- During each periodic performance test required by Section VI.E.4.
- Within the first thirty (30) days of engine operation from the date that the catalyst is cleaned, reconditioned, or replaced.

IV.C. Storage Tank Requirements

IV.C.1. The owner or operator of storage tanks must comply with the applicable emission control and recordkeeping requirements in Regulation Number 7, Sections XVII.C.1. and XVII.C.3., including, without limitation:

IV.C.1.a. The owner or operator of storage tanks with uncontrolled actual emissions greater than or equal to six (6) tons per year VOC based on a rolling twelve-month total must operate air pollution equipment that achieves an average hydrocarbon control efficiency of 95%. (Reference: Regulation Number 7, Sections XVII.C.1.b.)

IV.C.1.b. The owner or operator must follow the inspection requirements of Regulation Number 7, Section XVII.C.1.d.

IV.C.2. The owner or operator of storage tanks required to operate and maintain air pollution control equipment by Regulation Number 7, Sections XII.D. or XVII.C.1. must comply with the requirements of Regulation Number 7, Sections XVII.C.2. and XVII.C.3.

IV.C.3. In any ozone nonattainment or ozone attainment/maintenance area, the owner or operator of storage tanks containing condensate must comply with all applicable requirements of Regulation Number 7, Sections XII.C., XII.D., XII.E., and XII.F.

IV.C.4. These general operation and maintenance requirements apply to all storage tanks equipped with air pollution control equipment at the well production facility.

IV.C.4.a. When present, thief hatch seals must be inspected for integrity monthly and replaced as necessary. Inspections may be completed

with Approved Instrument Monitoring Method (AIMM) equipment, to avoid unnecessary openings of the thief hatch.

IV.C.4.b. Where present, thief hatch covers must be properly rated and properly seated.

IV.C.4.c. Where present, thief hatch springs must be inspected semi-annually to ensure proper rating and function.

IV.C.4.d. If the separator immediately upstream of the tanks is equipped with a dump valve, inspect the valve weekly to ensure it is not stuck open and not visibly clogged.

IV.C.4.e. Operators must retain records of these inspections, including the date, method (e.g. AIMM v. physical inspection), findings, and corrective action taken, if any.

IV.D. Hydrocarbon Loadout Requirements

IV.D.1. The owner or operator must follow hydrocarbon loading procedures that minimize emissions of VOCs and other hydrocarbons to the atmosphere. The following requirements apply to all hydrocarbon loadout operations. (Reference: Regulation Number 3, Part B, Section III.E.)

IV.D.1.a. Hydrocarbon liquid loading to truck tanks must be conducted by submerged fill.

IV.D.1.b. The owner or operator must inspect onsite hydrocarbon loadout equipment to ensure that hoses, couplings, and valves are maintained to prevent dripping, leaking, or other liquid or vapor loss during loading and unloading. The inspections must occur at least monthly and do not need to occur during active loading operations unless loadout operations are controlled. Each inspection must be documented in a log available to the division upon request.

IV.D.1.c. All compartment hatches at the facility (including thief hatches) must be closed and latched at all times when hydrocarbon loadout operations are not active, except for periods of active maintenance, gauging, or safety of personnel and equipment.

IV.D.2. The following general operation and maintenance requirements apply for all hydrocarbon loadout operations equipped with air pollution control equipment. (Reference: Regulation Number 3, Part B, Section III.E.)

IV.D.2.a. The owner or operator must install and operate vapor collection and return equipment to collect vapors during loading of tank compartments of outbound transport trucks.

IV.D.2.b. The owner or operator must include devices to prevent the release of vapor from vapor recovery hoses not in use.

IV.D.2.c. The owner or operator must use operating policies and procedures to ensure that hydrocarbon liquid not be transferred unless the vapor collection equipment is in use.

IV.D.2.d. The owner or operator must operate all recovery and disposal equipment at a back-pressure less than the pressure relief valve setting of transport vehicles.

IV.E. Separator Venting Requirements

IV.E.1. The owner or operator of a separator covered by this permit must ensure that gas coming off the separator, produced during normal operation from any newly constructed, hydraulically fractured, or recompleted oil and gas well, must either be routed to a gas gathering line or controlled from the date of first production by air pollution control equipment that achieves an average hydrocarbon control efficiency of 95%. (Reference: Regulation Number 7, Sections XII.C.1.b., XVII.B.1.a., XVII.G.)

IV.E.2. The owner or operator must continuously monitor and record the volumetric flow rate of natural gas emitted from the separator(s) using a flow meter. For this requirement, records do not include natural gas delivered to a gas gathering line. Total volumetric flow rate of natural gas must be recorded on a monthly basis. The owner or operator must follow manufacturer recommendations for the operation, maintenance, and calibration of the flow meter.

IV.E.3. These general operation and maintenance requirements apply to all separators equipped with air pollution control equipment at the well production facility. The owner or operator of separators controlled by air pollution control equipment must inspect the separator on a weekly basis

including monitoring and documenting the operating pressure of the separator.

IV.F. Fugitive Component Leak Emissions Requirements

IV.F.1. The owner or operator of a well production facility located in the 8-hour ozone control area must comply with leak detection and repair requirements, including but not limited to: monitoring, repair, re-monitoring, recordkeeping and reporting contained in Regulation Number 7, Section XII.L.

IV.F.2. The owner or operator of a well production facility must comply with leak detection and repair, including but not limited to: monitoring, repair, re-monitoring, recordkeeping and reporting contained in Regulation Number 7, Section XVII.F. Where the requirements of Regulation Number 7, Sections XII.L and XVII.F. overlap, the more stringent will control.

IV.G. Natural Gas-Driven Diaphragm Pneumatic Pumps Requirements

IV.G.1. The owner or operator of natural gas-driven diaphragm pneumatic pumps, as defined in Regulation Number 7, Section XII.B.18, located at a well production facility in an ozone nonattainment or ozone attainment/maintenance area must comply with Regulation Number 7, Section XII.K., including but not limited to: monitoring, repair, re-monitoring, recordkeeping and reporting requirements. natural gas-driven diaphragm pneumatic pumps that are in operation during any period of time during a calendar day less than 90 days per calendar year are not subject to Section IV.G.1. (Reference: Regulation Number 7, Section XII.K.)

IV.G.1.a. The owner or operator of each natural gas-driven pneumatic pump must reduce volatile organic compound emissions from the natural gas-driven pneumatic pump by 95% if it is technically feasible to route emissions to an existing control device or process at the well production facility. If the air pollution control equipment available onsite is unable to achieve a 95% emission reduction and it is not technically feasible to route the emissions to a process at the well production facility, the owner or operator must still route the natural gas-driven pneumatic pump emissions to the existing control device.

IV.G.1.b. If the owner or operator subsequently installs a control device or it becomes technically feasible to route the emissions to a

process, the owner or operator must reduce volatile organic compound emissions from the natural gas-driven pneumatic pump by 95% within thirty (30) days of startup of the control device or of the feasibility of routing emissions to a process at the well production facility.

IV.G.1.c. The owner or operator is not required to control natural gas-driven pneumatic pump emissions if, through an engineering assessment by a qualified professional engineer, routing a natural gas-driven pneumatic pump to a control device or process at the well production facility is shown to be technically infeasible.

IV.G.1.d. If the owner or operator uses a control device or routes emissions to a process to reduce emissions, the owner or operator must connect the natural gas-driven pneumatic pump through a closed vent system that routes the natural gas-driven pneumatic pump emissions to the process or control device.

IV.G.1.e. The owner or operator must conduct annual visual inspections of the closed vent system for defects that could result in air emissions. Defects of the closed vent system include, but are not limited to, visible cracks, holes, gaps in piping, loose connections, liquid leaks, or broken or missing caps or other closure devices.

IV.G.1.f. The owner or operator must conduct annual EPA Method 21 inspections of the closed vent system to determine whether the closed vent system operates with volatile organic compound emissions less than 500 ppm.

IV.G.1.g. In the event that a defect that could result in emissions or leak is detected, the owner or operator must make a first attempt to repair no later than five (5) days after detecting the defect or leak and complete repair no later than thirty (30) days after detecting the defect or leak.

IV.G.1.h. Owners or operators may delay inspection or repair of a closed vent system if:

IV.G.1.h.(i) Repair is technically infeasible without a shutdown. If shutdown is required, a repair attempt must be made during the next scheduled shutdown and final

repair completed within two (2) years after discovery.

IV.G.1.h.(ii) The closed vent system is unsafe to inspect or repair because personnel would be exposed to an immediate danger as a consequence of completing the inspection or repair.

IV.G.1.h.(iii) The closed vent system is difficult to inspect or repair because personnel must be elevated more than two (2) meters above a supported surface or are unable to inspect or repair via a wheeled scissor-lift or hydraulic type scaffold that allows access up to 7.6 meters (25 feet) above the ground.

IV.G.2. As an alternative to the inspection, repair, and recordkeeping provisions in IV.G.1.e. through IV.G.1.h., IV.G.2.e. and IV.D.2.f., the owner or operator may inspect, repair, and document the closed vent system in accordance with the leak detection and repair program in Section XII.L., including the inspection frequency.

IV.G.3. As an alternative to the emission control, inspection, repair, and recordkeeping provisions described in Conditions IV.G.1.a. through IV.G.1.h., the owner or operator may comply with natural gas-driven pneumatic pump emission control, monitoring, recordkeeping and reporting requirements of New Source Performance Standard in 40 CFR Part 60.

IV.G.4. The owner or operator of pneumatic pumps located at a well production facility in an ozone nonattainment or ozone attainment/maintenance area must maintain the following records for at least five (5) years and make records available to the division upon request. (Reference: Regulation Number 7, Section XII.K.3.)

IV.G.4.a. Identification of each natural gas-driven pneumatic pump;

IV.G.4.b. For natural gas-driven diaphragm pneumatic pumps in operation less than 90 days per calendar year, records of the days of operation each calendar year;

IV.G.4.c. Records of control devices designed to achieve less than 95% emission reduction, including an evaluation or manufacturer

specifications indicating the percentage reduction the control device is designed to achieve;

IV.G.4.d. Records of the engineering assessment and certification by a qualified professional engineer that routing natural gas-driven pneumatic pump emissions to a control device or process is technically infeasible;

IV.G.4.e. Each closed vent system inspection and any resulting responsive actions; and

IV.G.4.f. Each closed vent system on the delay of inspection or repair list, the reason for and duration of the delay of inspection or repair, and the schedule for inspecting or repairing such closed vent system.

IV.H. Natural Gas-Driven Pneumatic Controllers Requirements

IV.H.1. The owner or operator of natural gas-driven pneumatic controllers located in an ozone nonattainment or ozone attainment/maintenance area must comply with Regulation Number 7, Sections XVIII.C., XVIII.D. and XVIII.E. This includes but is not limited to: monitoring, repair, re-monitoring, recordkeeping and reporting requirements.

IV.H.2. The owners and operators of well production facilities in an ozone nonattainment or ozone attainment/maintenance area must reduce emissions of VOC and other hydrocarbons from natural gas-driven pneumatic controllers associated with affected operations as follows: (Reference: Regulation Number 7, Section XVIII.C.)

IV.H.2.a. All natural gas-driven continuous bleed pneumatic controllers must emit natural gas emissions in an amount equal to or less than a low-bleed pneumatic controller, unless allowed pursuant to Regulation Number 7, Section XVIII.C.1.

IV.H.2.b. For natural gas-driven pneumatic controllers placed in service on or after May 1, 2014, utilize no-bleed pneumatic controllers where on-site electrical grid power is being used and use of a no-bleed pneumatic controller is technically and economically feasible.

IV.H.2.c. If on-site electrical grid power is not being used or a no-bleed pneumatic controller is not technically and economically feasible,

utilize pneumatic controllers that emit natural gas emissions in an amount equal to or less than a low-bleed pneumatic controller, unless allowed pursuant to Regulation Number 7, Section XVIII.C.3.c. Instead of a low-bleed pneumatic controller, owners or operators may utilize a natural gas-driven intermittent pneumatic controller.

IV.I. Well Maintenance and Well Liquids Unloading Requirements

IV.I.1. The owner or operator of a well production facility must comply with the requirements of Regulation Number 7, Section XVII.H., by using best management practices to minimize hydrocarbon emissions and the need for well venting associated with downhole well maintenance and liquids unloading, unless venting is necessary for safety. (Reference: Regulation Number 7, Section XVII.H.)

IV.I.2. Records of the cause, date, time, and duration of venting events under Section XVII.H. must be kept for two (2) years and made available to the division upon request.

IV.J. Natural Gas Fired Turbine Requirements

IV.J.1. The owner or operator of a natural gas fired turbine at a well production facility must comply with the particulate matter and sulfur dioxide emission regulations of Regulation Number 1 including, but not limited to, the following:

IV.J.1.a. Emissions of particulate matter in the flue gases must not exceed the requirements listed in Regulation Number 1, Section III.A.1.

IV.J.1.b. Emissions of sulfur dioxide must not exceed the combustion turbine limitations listed in Regulation Number 1. For existing turbines refer to the requirements listed in Regulation Number 1, Section VI.A.3.c and for new turbines refer to the requirements listed in Regulation Number 1, Section VI.B.4.c.

IV.J.2. The owner or operator must follow manufacturer recommendations for the operation and maintenance of the turbine and its air pollution control equipment. These schedules and practices, as well as all maintenance records showing compliance with these recommendations, must be made available to the division upon request.

V. Testing and Monitoring Requirements

V.A. Testing requirements

V.A.1. The owner or operator of any flare or combustion device used to meet the requirements of this permit must visually check for, on a weekly basis, the presence or absence of smoke. If smoke is observed, either the equipment must be immediately shut-in to investigate the potential cause for smoke and perform repairs, as necessary, or EPA Method 22 must be conducted to determine whether visible emissions are present for a period of at least one (1) minute in fifteen (15) minutes. (Reference: Regulation Number 7, Sections XII.C., XII.E.3., XVII.A.17., XVII.B.2., and XVII.C.1.d.(v))

V.A.2. The owner or operator of natural gas fired engines covered by this permit which are equipped with a catalytic emission control device must complete periodic performance tests for NOx and CO using a portable analyzer semi-annually (or within a 4,380 hour operating period if the engine does not run continuously) to indicate continued performance of the catalyst and proper operation of the engine per emission limits specified in this permit. The initial periodic performance test must be completed within 180 days of commencement of operation of the natural gas fired engine.

V.A.2.a. Each performance test should be performed with the engine operating at the highest load practicable. However, it is not required to artificially load the engine in order to perform the test.

V.A.2.b. All performance tests using a portable analyzer must meet the requirements established in the Portable Analyzer Monitoring Protocol or other division approved protocol, including recordkeeping requirements.

V.A.2.c. At the owner or operator's discretion, a performance test using a reference test method may be used instead of a portable analyzer.

V.A.2.d. If the engine fails a portable analyzer test, corrective action must be taken and documented within 15 days of the test.

V.A.2.e. The owner or operator must document the results of each portable analyzer or reference test, including:

V.A.2.e.(i) Air-fuel ratio controller (AFRC) oxygen sensor mV reading, and

V.A.2.e.(ii) Record the AFRC setpoint and reading.

V.A.3. If the general permit registration application requests greater than 95% control efficiency for VOC emissions from any separator the owner or operator must conduct an initial source compliance test on the enclosed combustion device. The initial compliance test must be completed within 180 days of commencement of operation of the separator. The initial compliance test must demonstrate compliance with the emissions limit VOC and to demonstrate a minimum destruction efficiency equal to or greater than the control efficiency requested in the general permit registration application. At a minimum the following must be measured and recorded during the compliance test:

- mass emission rates of VOC at the inlet of the control device (Mi) using EPA approved methods;
- mass emission rates of VOC at the outlet of the control device (Mo) using EPA approved methods;
- combustion chamber temperature;
- gas flow rate;
- supplemental fuel flow rate;
- gas heat content; and
- gas composition.

The test protocol, test, and test report must be in accordance with the requirements of the Air Pollution Control Division Compliance Test Manual. The test protocol must be submitted to the division for review and approval at least thirty (30) days prior to testing. No compliance test will be conducted without prior approval from the division. Within thirty (30) days following completion of the test(s), a compliance test report must be submitted to the division for review within 30 days of completion of the compliance test. Additional time may be granted upon written request. Any compliance test conducted to demonstrate compliance with an annual emission limitation shall have the results projected up to the annual averaging time by multiplying the test results by the process limit(s) for that averaging time as indicated in the application for this general permit. (Regulation Number 3, Part B., Section III.G.3)

V.B. Air pollution control equipment monitoring requirements

V.B.1. The owner or operator of air pollution control equipment used to meet the requirements of this permit must monitor and document the proper operation of the air pollution control equipment on a weekly basis.

V.B.1.a. Inspections can be done by either visible observation or other means approved by the division.

V.B.1.b. A check box is suitable for recording proper operation.

V.B.1.c. Indications of improper operation for a flare or combustion device include, but are not limited to,

V.B.1.c.(i) absence of pilot light,

V.B.1.c.(ii) malfunction of electronic ignition,

V.B.1.c.(iii) clogged burner tray, or

V.B.1.c.(iv) presence of smoke.

V.B.2. The owner or operator of air pollution control equipment used to comply with this permit must document improper operation by recording:

V.B.2.a. a description of the problem,

V.B.2.b. the resolution of the problem,

V.B.2.c. the date range the air pollution control equipment was improperly operating or not operating, and

V.B.2.d. the process throughput when air pollution control equipment is not operating.

V.B.3. The owner or operator of any flare or combustion device used to meet the requirements of this permit must check and document on a weekly basis that the valves for piping of gas to the auto-igniter or pilot light and piping of waste gas to the air pollution control equipment are open.

VI. Emission and Process Recordkeeping Requirements

VI.A. Emission limitations and emission tracking requirements

VI.A.1. The owner or operator must calculate actual emissions of criteria and hazardous air pollutants from all APEN reportable sources each month and keep a compliance record on site or at a local field office with site

responsibility for division review. For criteria and hazardous air pollutants, the owner or operator must maintain records on a rolling twelve (12) month total basis. By the end of each month a new twelve month total is calculated and recorded based on the previous twelve months' data.

VI.A.2. For emission sources registered to this general permit, the owner or operator must maintain monthly process records used to support monthly actual emissions calculations for each emissions point, as listed in the table below.

Emission Source	**Monthly records of the following data**
Natural gas fired engine	Natural gas fuel consumption
Storage tanks	Produced water, crude oil, condensate, and intermediate hydrocarbon liquid throughput
Hydrocarbon liquid loadout to tanker trucks	Crude oil, condensate, and intermediate hydrocarbon liquid throughput
Separators	Natural gas throughput
Natural gas-driven diaphragm pneumatic pumps	Natural gas actuation throughput
Natural gas fired turbines	Natural gas fuel consumption
Natural gas-driven pneumatic controllers	Number and type of pneumatic controller
Fugitive component leaks	Number, type and gas/liquid service of components
Well Maintenance & Well Liquids Unloading	Natural gas throughput

VI.A.3. The owner or operator must maintain documentation of all periods of air pollution control equipment downtime and use the information to determine appropriate control percentages in calculating actual emissions.

During periods of air pollution control equipment downtime, emissions must be calculated as uncontrolled.

VI.B. Records may be kept in either electronic format or hard copy provided that they can be promptly supplied to the division upon request. All records must be retained for a period of five (5) years.

VI.C. The following records must be maintained on site or at a local field office with site responsibility for division review:

VI.C.1. The current version of this general construction permit.

VI.C.2. The general permit registration approval letter, once received.

VI.C.3. Records of dates of commencement of operation for each individual piece of equipment covered under this general permit.

VI.C.4. Records of dates of commencement of operation for air pollution control equipment used to meet the requirements of this general permit.

VI.C.5. Any other records required by conditions of this permit.

VII. General Permit Registration Approval Process and Expiration

VII.A. Conditional certification of a registration under this general permit is effective from the date the complete registration request is received by the division. A complete registration request consists of all General Permit application materials required by the division and associated fees. The owner or operator may commence construction and operation of the well production facility as represented in the registration upon receipt of the completed registration request by the division. In the event the well production facility does not qualify for registration under the general permit the owner or operator accepts the liability of commencing these activities.

VII.B. The division will determine completeness of the General Permit registration request within thirty (30) days of the date of receipt of the request and provide written notification to the applicant. If the applicant does not receive notification of a completeness determination from the division within thirty (30) days, the General Permit registration request will be deemed complete for the purpose of Condition VI.C and VII.A.

VII.C. The division has ninety (90) calendar days from the date the division receives a complete General Permit registration request to provide the applicant with a written approval or denial of the registration.

VIII. General Permit Terms and Administration

VIII.A. General Terms

VIII.A.1. The requirements of Regulation Number 3, Part D apply at such time that any well production facility or modification becomes a major well production facility or major modification solely by virtue of a relaxation in any enforceable limitation that was established after August 7, 1980 on the capacity of the well production facility or modification to otherwise emit a pollutant, such as a restriction on hours of operation. (Reference: Regulation Number 3, Part D, Sections V.A.7.b. and VI.B.4.)

VIII.A.2. This well production facility may be able to utilize the Affirmative Defense Provision for Excess Emissions During Malfunctions contained in Common Provisions Regulation, Part II, Subpart E. The owner or operator must notify the division of any malfunction condition which causes a violation of any emission limit or limits stated in this permit as soon as possible, but no later than noon of the next working day, followed by written notice to the division addressing all of the criteria set forth in Part II.E.1 of the Common Provisions Regulation.

VIII.A.3. This permit is granted subject to all rules and regulations of the Colorado Air Quality Control Commission and the Colorado Air Pollution Prevention And Control Act C.R.S. (25-7-101 et seq), to those general and specific terms and conditions included in this document.

VIII.A.4. Unless specifically stated otherwise, the general and specific conditions contained in this permit have been determined by the division to be necessary to assure compliance with the provisions of Section 25-7-114.5(7)(a), C.R.S.

VIII.A.5. Each and every condition of this permit is a material part hereof and is not severable. Any challenge to or appeal of, a condition hereof must constitute a rejection of the entire permit and upon such occurrence, this permit must be deemed denied ab initio.

VIII.A.6. Section 25-7-114.7(2)(a), C.R.S. requires that all well production facilities required to file an Air Pollutant Emission Notice (APEN) must pay an annual fee to cover the costs of inspections and administration.

VIII.A.7. Violation of the terms of a permit or of the provisions of the Colorado Air Pollution Prevention and Control Act or the regulations of the AQCC may result in administrative, civil or criminal enforcement actions under

Sections 25-7-115 (enforcement), -121 (injunctions), -122 (civil penalties), -122.1 (criminal penalties), C.R.S.

VIII.A.8. Registration under this permit is approved in reliance upon the accuracy and completeness of information supplied by the owner or operator and is conditioned upon operation of the well production facility, in accordance with this information and with representations made by the owner or operator or owner or operator's agents. It is valid only for the equipment and operations or activity specifically identified on the general permit registration.

VIII.B. Registration Revision/Termination

VIII.B.1. The division may deny or revoke registration under the general permit under the circumstances specified in Regulation Number 3, Part B, Section III.I.3.c. and require the owner or operator to apply for a Construction Permit as required by Regulation Number 3, Part B.

VIII.B.2. A registration under this general permit may be reissued to a new owner by the division as provided in Regulation Number 3, Part B, Section II.B. upon request for transfer of ownership and the submittal of a revised APEN, revised general permit registration and the required fees.

VIII.B.3. Registration under this general permit is voluntary. The owner or operator may withdraw or cancel a registration under this general permit at any time by notifying the division in writing. The owner or operator can apply for a Construction permit as necessary per Regulation Number 3, Part B.

VIII.C. General Permit Revision/Termination

VIII.C.1. This general permit remains in effect until revised or terminated by the division in accordance with the provisions of Regulation Number 3 or through expiration per the provisions of condition I.F.1.

VIII.C.2. After public notice and comment as provided by Regulation Number 3, Part B, Section III.I.7., the division may revise this general permit in order to add or delete requirements or limitations to the permit. This public notice must be conducted in a manner consistent with the provisions of Regulation Number 3, Part B, Section III.C.4.

VIII.C.3. If the division revises this general permit, it will provide written notice to affected owner or operators prior to the revision of the general permit. The notice will advise the owner or operators that any existing registration

to use the general permit will be automatically converted to a registration to use the revised general permit, provided that the owner or operator continues to meet all requirements of the revised general permit. Persons not wishing to continue coverage under the revised general permit have the option of applying for a Construction Permit as required by Regulation Number 3, Part B, or apply for a different general permit, as appropriate.

VIII.C.4. If the division terminates this general permit, it will provide written notice to affected owner or operators prior to the termination of the general permit. The notice will advise owner or operators that they must apply for a Construction Permit as required by Regulation Number 3, Part B.

VIII.C.5. The division may require any well production facility authorized by a general construction permit to apply for and obtain a Construction Permit if circumstances have changed since the time of the original general permit application so that the well production facility is no longer appropriately controlled and/or permitted under the general construction permit. (Reference: Regulation Number 3, Part B, Section III.I.3.c.(i)(B))